Circuitry changing or compensating electrical properties of current converter with magnetic field compensation - contains prim., sec. and measurement coils on core, Hall element in air gap feeding compensation current source controller

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Equivalents:

Abstract

The circuit contains a primary coil on the core (2) of a magnetic circuit with an air gap and switchable into a line carrying the measurement current. A secondary compensation coil (5), with an order higher winding count and mounted on the core, is connected to the output of a controllable compensation current source (6). The output of a Hall element (11) in the air gap is connected to the control input of the compensation source.
A further coil (14) on the core is connected to an additional controllable current generator (15) whose control input (16) is driven by a measurement device (13) for the compensation current via a control and evaluation circuit (17).
USE/ADVANTAGE - Measuring a.c. and d.c. Can be produced at low cost and all drift occurring during measurement can be compensated.